

Attorney Docket No.: SIT-0106
Inventors: Esche and Nazalewicz
Serial No.: 09/954,994
Filing Date: September 19, 2001
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REMARKS

Claims 1 and 2 are pending in the instant application. Claims 1 and 2 have been rejected. Claims 1 and 2 have been amended. No new matter has been added by this amendment. Reconsideration is respectfully requested in light of the following remarks.

I. Rejection of Claims Under 35 U.S.C. §102

Claim 2 remains rejected under 35 U.S.C. §102(b) as being anticipated by JP-2000291725 (JP '725). The Examiner suggests that figure 2 of JP '725 shows a device for adaptive vibration attenuation comprising a passive isolator 14a, 18, 22, 28 with a non-linear force-deflection characteristic as disclosed in line 3 of the novelty section of the English abstract, wherein the passive isolator comprises a mechanical actuator 14a, 18, 22, 28 which varies an operating point of the passive isolator along the force-deflection characteristic and is comprised of a coiled spring 28, a load supporting rod 18, a non-linear spring 14a and a means 22 for externally controlling a preload to the coiled spring whereby as the coiled spring force is varied, the load supporting rod transfers pressure to the non-linear spring via elements 12, 16, and 28. Applicants respectfully disagree.

The abstract of JP '725 teaches a coiled spring 28, a non-linear spring 14a and an adjustment mechanism composed of rod 18 and nut 22. In this regard, rod 18 is not independent of nut 22. In contrast, Figure 2 of the present application depicts the instant device as being comprised of four distinct and

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independent elements, i.e., a coiled spring 58, a load supporting rod 16, a non-linear spring 14 and a means for externally controlling a preload to said coiled spring 60. These independent features are further described at pages 7 and 8. Accordingly, in an earnest effort to clarify the structure of the instant device, Applicants have amended claim 2 to indicate that the means for externally controlling a preload to the coiled spring is independent of the load supporting rod. Because JP '725 does not teach a load supporting rod which is independent of a means for controlling a preload to a coiled spring, this reference does not anticipate the device set forth in claim 2. It is therefore respectfully requested that this rejection be reconsidered and withdrawn.

II. Rejection of Claims Under 35 U.S.C. §103

Claim 1 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Shores et al. (U.S. Patent No. 6,361,031) in view of Wolf et al. (U.S. Patent No. 5,700,000). The Examiner suggests that Shores et al. teach a device for adaptive vibration attenuation comprising a passive isolator 22 with a force-deflection characteristic and an operating point wherein the passive isolator comprises a pneumatic actuator 44, 62, and vacuum actuated valves which vary the operating point of the isolator along the force-deflection characteristic wherein the pneumatic actuator comprises at least one upper pressure chamber 44, a spring 22, and one lower pressure chamber 26 independent of the upper pressure chamber wherein air pressure in the at least one upper pressure chamber can be externally controlled and wherein the natural frequency of the system is regulated by applying

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pressure to the upper pressure chamber or the lower pressure chamber, particularly the upper pressure chamber. The Examiner acknowledges that the Shores et al. do not disclose that the force-deflection characteristic of the passive isolator is non-linear or that the passive isolator or spring 22 is non-linear; however, Wolf et al. teach that the use of vibration attenuation device comprising a passive isolator or spring 2 with a non-linear force-deflection characteristic or being characterized as a non-linear spring. The Examiner suggests that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the passive isolator of Shores et al. to include the non-linear force-deflection characteristic of Wolf et al. in order to provide a means of allowing good dampening and preventing shaking even at large amplitudes of perturbation as taught by Wolf et al. Applicants respectfully disagree.

Shores et al. teach a device with damping provided by an elastomeric insert 22 located in the lower section of the housing 12 (see Figure 1 and column 3, lines 19-24). Likewise, Wolf et al. teach a device with a support body 2 located near the outer periphery of the device (see Figure 4), wherein the support body provides an elastic characteristic. As depicted in Figure 1 and taught at page 4 (lines 30-31) of the instant application, the upper pressure chamber 10 and lower pressure chamber 12 of the instant device are on either side of a non-linear spring 14. As such, load is transferred between the chambers via the non-linear spring (see page 6, lines 23-32). Thus, in an earnest effort to clarify the passive isolator device, Applicants have amended claim 1 to indicate that the upper pressure chamber and lower

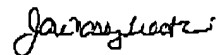
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pressure chamber are on either side of the non-linear spring of the device. Because the combined references fail to teach or suggest an upper pressure chamber and lower pressure chamber on either side of a non-linear spring, these references fail to make the passive isolator of claim 1 obvious. It is therefore respectfully requested that this rejection be reconsidered and withdrawn.

III. Conclusion

The Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited.

Respectfully submitted,



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